



Union Chronicles

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The Union Chronicles (Book One)

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To hear the rhythm and know the dance, and climb the spiral staircase.
Above we go to the great unknown, where fate will find us soon.

Glossary of terms

The Union of Alethea - *A Union of African nations founded at the end of the Great War in 2005.*

The Great War - *A regional war fought between the Alethean Liberation Army and the Nyumba Regime from 2000 until 2005.*

The Nyumba Regime - *The authoritarian regime that took power over the African continent in 1960. The regime began its campaign on the South Western Cape of Africa and was led by Alphius van Staaden. It quickly invaded the Southern half of the African continent, but was met with resistance from the Alethean liberation army in 2000.*

1. Artero

If life has no inherent meaning, perhaps we might attempt to infuse it with our own meaning. And if at first the meaning with which we infuse it is merely another self delusion, then perhaps in the next instance of the realization of life's futility we might return with a more refined answer to the question of our purpose. We build, we invent, we think and we attempt to reason, but to what end? For Artero, the moment he was old enough to ask the question, and to bring to trial all of the incorrect assumptions and indoctrinations he had sheltered himself in, was the moment he realized the need for humans to venture out into the unknown. At

first glance, one might find meaning in the discovery of others besides ourselves and our tribes. So we venture out and we search, and search until we find some other tribe of humans, perhaps similar to us in some regard, perhaps much different to us in other ways. And we find our meaning in them because we either foster friendships and allegiances with them or we war with them and they become our enemies - and suddenly we have ascribed purpose to ourselves. Our purpose is to work with them to achieve some larger purpose, or we close the circuit -our purpose is to war with them. But then we realize that we have not really answered the question, because sooner or later, even war has to end - so we have not really closed the circuit, we've only temporarily distracted ourselves. So then we venture out again - perhaps further. Perhaps we find the shores of the ocean, and we learn to master it - and so for a time, we find meaning in trying to learn this thing: how do we overcome the waves and get into the deeper ocean, and what can float on this ocean. Should we scale down at first and attempt to make something that floats in our rivers or lakes? What shape and form best facilitates this floating action? What materials? Where can we find the materials? And so our meaning becomes finding an answer to these questions, and through trial and error we find some answers and as time passes we refine our answers until we have enough mastery over the craft to overcome the waves and venture into the ocean. And so our purpose becomes to learn how to survive the oceans - and perhaps to see what lies beyond our lands. So we learn how to navigate the oceans -we devise some scheme to make sense of the vast unknown - perhaps we look into the skies and see the stars, and we notice the patterns. And if we notice the patterns, we begin to observe them, and we begin to

observe their movements throughout the seasons. And in the process, they become another vast unknown, although seemingly inaccessible. So we find our meaning in understanding them deeply. Suppose we then gain a rudimentary understanding of the skies above - their inaccessibility might form in our mind the intuition that they are signs from the gods, showing us the times, the seasons and the way to go. We grow to rely on them, and as a consequence of our disposition to find meaning even in the shapes of scattered clouds, we seek to ascribe meaning to them, and so we form a more solid and lasting meaning to our lives; up there are the gods, down here are their creations. Because everything comes from above - the rain, the sunshine, the light from the stars - all the things that sustain us and help us to navigate. And for a time we find solace in this disposition of ours, a beautiful illusion and comfortable framework from which we can find meaning for our lives. And perhaps this gives us a contentment for some time, and we cease to explore and proceed to please the gods, as best we can. We write about them, we sing about them, we tell our youngsters stories about them. We wait for them. Quietly. Disaster strikes us and we struggle to reconcile, we call it the wrath of the gods because we've come to rely on their protection. Because surely, since they gave us the stars to navigate, the sun and fire for warmth, the rain for growth, they will give us refuge from our disaster? And when they don't, surely we've gone terribly wrong? Artero wondered where we had gone wrong. Artero's home, on the horn of Africa, now called Psarionopolis had been overcome by warlords from the South. It began with the discontent of the masses rooted in the economic disparities that had seemingly increased since the founding of the Alethean Union after the great war of the early

2000s and a long period of stagnation. Discontent led to dissent and disillusionment with the new order - leaving the masses to find solutions elsewhere. An unholy alliance formed between the warlords and the local leaders of Psarionopolis. The people of Psarionopolis wanted to secede from the Union and to form a new nation with economic policies focused on the redistribution of wealth, and the upliftment of the long neglected working class of fisherman and sailors that lived in Psarionopolis. They were the Union's largest fish supplier and a key shipping port connecting to their Asian trade routes - the Asians being a key partner of the Union. Artero's father was a naval engineer, and his mother ran a local fishery - she supplied fish to local restaurants as well as to the rest of the Union. Together Artero's parents earned enough to put him through high quality schooling in central Alethea, where Artero performed well throughout his schooling career. Artero had an aptitude for engineering - a skill that he had learned at an early age from spending a lot of time with his father as he worked on schematics for boat and ship designs and helped create prototypes for these naval vessels. His father was a practical and pragmatic man who found his start as a naval engineer during the great war. With the port of Psarionopolis having been a power center during the war, naval production was in demand - the army needed merchant ships to get resources from its allies abroad and needed destroyers to escort them. Tobias Bolt, Artero's father, was involved in the design and production of Alethean merchant marines as well as the design of weapons and radar systems on the AL Ocean Thunder destroyers. An avid mathematician and engineer, he pioneered the destroyer's hypersonic missile launcher and its advanced drone deployment units, which included four units

attached to the side of the ship for deploying unmanned submarine drones. The quantum radar system utilized advanced feature detection to identify hypersonic missiles early, for deterrence. Tobias's team played a significant role in the Union of Alethea's victory over the Nyumba regime. Now the freedoms that Artero's father and the Alethean liberation army had fought so hard for, were under threat from a new enemy - themselves. The failure of the Union to alleviate the economic strife in some of its most important regions was starting to show. Suddenly the weight of an ambitious idea was pressing down on the leaders of the Union. The international community supported the Union because they opposed its alternative, the Nyumba regime, but even before the war had begun, many world leaders were skeptical of the idea of a union composed of so many different nations and cultural identities, especially given the fact that Africa had already had difficulties with fostering peace between rival ethnic groups. Now perhaps, if it were implemented gradually, beginning with trade agreements and progressing to open borders gradually, it may have worked, but the immediate needs for soldiers and human resources during the war forced the Alethean's to follow through with full unionization by coming to agreement with local leaders who were opposed to the Nyumba regime. Alethea needed engineers to manufacture drones and missile systems, and they never had the benefit of robots like Nyumba regime did, so they needed a huge military to try to overcome these odds. The Nyumba regime was quickly forming the most advanced military in the world, and had aggressive goals to first take Africa and then the West. Artero's mother, Aamiina, was religious. She often told Artero stories of how the great Somandla had come to the aid of her family during the war

and saved them on multiple occasions. When they needed rain, They gave rain, when they needed refuge, They gave refuge. These stories comforted Artero when he was younger - and now, although he could no longer quite believe all of the stories of Somandla that had been passed on through the generations, he found part of himself hoping it was true. His parents wanted him to move to central Alethea, to the city of hope, Tsholofelo, and to stay with his Uncle during the holidays when he was not studying. Artero was set to start his first year of University and having performed excellently in high school, he was accepted into University of Alethea's Mechanical Engineering course. He hoped to engineer rockets one day - either for a private company or for the Union. But with Psarionopolis under siege, he felt his dreams slowly slip away...If there was a war, the Union would have to shift its focus away from space travel, he thought to himself. You see for Artero - he believed there was meaning to be found in the discovery of life on other planets - because then we could really help - we could foster the evolution of this life and safeguard it from natural threats, allowing life elsewhere to flourish as it did on Earth. To Artero, this would finally give humans meaning that stretches beyond just self preservation. And what of the gods? Perhaps if humans are capable of nurturing life, and life other than its own, it is proof that what created humans is capable of the same compassion. This tension between the spiritual and the pragmatic caused something of a dissonance in Artero. But, suppose after all it were true, perhaps mercy could be shown to someone who relentlessly sought the truth. Perhaps the universe was just.

Artero had his headphones on. He was sitting on a hyperloop train en-route to the capital city of Alethea, Pneumopolis. It was a 2 hour trip so Artero got comfortable. He had a lot on his mind. Psarionopolis was slowly falling apart and the Union's forces hadn't restored peace there yet and the worst part was that there was no easy fix for this; Artero was not able to do anything about this - there were no engineering solutions that could fix the problems the city had overnight. This sense of living in a world where the most consequential things were out of your control laid the groundwork for Artero's foray into the philosophical. It was for this reason that Artero had dedicated this train trip to gathering his thoughts. The snack vendor rolled her trolley of snacks into the coach. "Good morning sir, would you like anything to eat or drink?" The lady pushing the trolley asked. "Morning. Could I get an Elvian Elixir, a packet of Sour Jellies and a chicken and barbeque empanada?" The lady reached into the insulated metal container for the empanada, grabbed the drink and the Sour Jellies and passed them to Artero. "That will be five drachians and fifty cents." She said, "Are you paying with cash or card?" "Cash," Artero pulled out a note and a coin from his wallet, "Thank you very much! Have a great day."

It wasn't long before Artero reached his destination. The Pneumopolis hyperloop station was built at the end of the Great War, the project was spearheaded by Jamil-Wiccan Litshe and Friederich Aucamp. That pair of founders was actually responsible for a variety of innovations across Pneumopolis, and they had an entire museum dedicated to their work, built for them by the Alethean Union in collaboration with the private sector in 2009. The hyperloop station itself had a museum section that Artero wanted to visit to buy some memorabilia for some of his family members and for himself, and just across the

street from the hyperloop station was the Pneumopolis City Football Club store, which he wanted to buy a hoodie, scarf and beanie from - winter was coming, and he wanted to be prepared. Artero grabbed his belongings, stepped off the hyperloop train and made his way to the escalator leading to the museum section. It was already quite chilly outside - but he had anticipated this, and he was wearing his favourite trenchcoat. The station had a very pleasant and welcoming fragrance; it was a combination of a floral scent and the subtle smell of coffee and savoury food. Artero was surprised by how clean they managed to keep this station, it was all incredibly well managed. Rovers and robots roamed around, cleaning the floors and helping people who needed directions. If you put your augmented reality specs of choice on and navigated to your StationXR app, you would automatically receive these directions, and you would see floating green arrows pointing to the place you wanted to go. It was essentially just an XR GPS - the cool part was if you were wearing a neural interface, you could just think about your destination and you would be led there. Artero's beanie was fitted with both a neural interface and bone conduction headphones - he had Kendrick Lamar's new self-produced album playing. The audio quality was crisp - it was completely mixed and mastered by an AI model which was trained by his in-house engineers. The perfect soundtrack to start a new chapter with.

2. Percival

“Percival, to be frank with you, we are concerned... by your lack of focus and lack of energy in class. Your grades have steadily declined and you’re two years away from matriculation. This is the best institution in Alethea, and you have access to all the help and resources that you need, so what is going on?” He had heard this line of questioning so many times, that at this point, he was numb to it. “I’m not proud of these marks, and if you give me a chance, I can turn them around, I’ve just had a difficult time keeping focus and I can barely finish my exams.” The school councillor looked at him sceptically, “But you have never applied for extra exam time, why is that?”. He didn’t have an answer, these days he didn’t have an answer to many things. Percival felt like he was sleepwalking, like he was alive but just going through motions. He distracted himself with reading and painting – his favourite ways to pass time. Percival’s mind became an escape, and a world he lived in, at the cost of the real world outside of him. You see, for Percival, he had no excuse for not doing well, because he was that privileged child. Of all his cousins, he had been dealt with the best hand, and he surely couldn’t complain about anything. After all, he had everything. So, at that age, he truly didn’t have the answer to everyone’s questions about his unmet potential, or why he disappointed their expectations. But when he grew older, he realized, being lucky doesn’t mean that nothing bad ever happened. He suppressed so much, because he felt like he had no right to complain, and that suppression pushed

him into his head, the only place where he could live, where he was understood. The things he saw when he grew up, and the things that happened to him, and perhaps even, the things that he did as a child, had all culminated into a tapestry of trauma that he had imprisoned himself in- tenth grade was the peak of this. He matriculated from high school, but he never got the marks he hoped to get. He had hoped to study mechanical engineering, but one other subject he excelled in during high school was history. So, in his first degree, Percival majored in history, while working on his passions on the side, whenever he got time. He worked on his paintings, and although he was decent, he was not enrolled in a formal art course and his art pieces were not selling at all. He settled for having his pieces included in galleries for free, whenever they happened to have unfilled space. His style of art was not one of the respected art forms, and artistic snobs looked down on artists like him, because they saw the art they made as low effort and synonymous with a particular type or class of person. When he was younger, he and his father would spend the weekends watching documentaries on the discovery channel, about space exploration and science. Percival never believed he could ever learn those things himself, but he loved them, even in high school when he failed in the subjects that would have opened the doors for him to learn them. He settled for painting the cosmos. The one thing Percival knew he could do well, was to show people the universe using colours on the canvas. He likened it to the way a musician might paint a picture using storytelling. He came across a story of a young knight named Percival – a mythical character with whom he shared a name. Percival had entered a sacred building, filled with something magical, which he could not explain, but his error was that he failed to ask questions about this magic, and when he left, he fell into great misfortune, as a consequence of his failure to

ask. Percival felt like his story paralleled his school career. A school, at its best, is a place filled with knowledge- a place filled with mysteries which we can learn, and those that seize the opportunity to learn, become masters of this knowledge, and can wield the skills they learn to invent and create as far as their imagination, grit and will take them. It must have been cosmic irony that he had the same name- as if whoever was writing the story of his life did it intentionally – like a humorous creator. But something happened during the final years of his undergraduate studies in history...He began to feel the magic of learning again, but he also began to feel the urge to apply what he was learning to help people in the real world. He had spent so much time in the theoretical, that he had no concept of what it took to create solutions to all the suffering that he read about in history. Percival dropped out of the history degree in his final year, and took a foundation course in mathematics, with the hope that he could use it to apply for a more advanced course in the future. Somewhere deep inside, he still had hopes of reviving his engineering dreams, but as life would show him, sometimes life doesn't take you where you want to go, but it takes you where you're needed. During the module on mathematical algorithms, a subject that took Percival a long time to become decent at, he noticed something. In retrospect, he thought to himself, he couldn't believe he never noticed this before. When you start to recognize patterns easily, you begin to see that most of what we do in life is some form of pattern recognition. An historian joins the dots of the recorded details of individuals and nations, a painter joins the dots of primitive shapes like squares and circles to create a more complex, and comprehensive image. A musician might join notes, to compose a song. Each note on its own, means very little. A writer might take from their lives, dots of experiences and perhaps their personality, or the personality of

others that they know, and join the dots into a tapestry that we call a story. All forms of creation are pattern recognition, and the application of patterns to show a picture. The patterns of our actions, paint the picture of our characters, and the patterns of our experiences, our personality – although we have a degree of control over our reactions to our experiences. We can reshape these patterns in our life, to become the optimal version of ourselves. Just like we can rearrange an algorithm, to produce that most optimal and efficient method to complete an operation. In computers, this is the foundation of every well written program. A program that functions efficiently, because of the simplification of instructions to a computer, using complex algorithms. There is a goldilocks-zone for efficiency in each form of creation – we of course don't want too much simplicity when building our house, because we may want the house to have aesthetic and character, as well as enough functionality to live comfortably inside. We also don't want too much complexity, or the design of the house becomes convoluted, and, at least for most people, this may not be an ideal space to live in. We're always looking for the balance that works for the task at hand. Percival began to realize that this was his second chance to fully embrace the knowledge he had access to. Life doesn't afford many people second chances, and he certainly didn't want to push his luck, so he pushed himself instead. He put his head down and forced himself to learn, even the most gruelling aspects of the subject he was studying. There could be no more hesitation, and certainly no more self-pity. He had to ask all the questions he could while he still had the chance.

He finished his mathematics foundation course and applied to a data science degree program at the University of Alethea, one of the best tertiary institutions in the world. Imposter syndrome set soon after he learnt that he was now going to be learning with

people who were talented and had achieved the top marks in their high schools. Percival was proud of himself for the marks he had managed to achieve in his mathematics foundation course, because he finally proved to himself that his potential had only been limited by his mindset – the way he saw the world. When he opened his view of the world, his potential had more space to flower out. But now was the real test. Finishing this course and doing well in it, would be orders of magnitude more difficult than anything he had achieved or created before. Percival rose to the occasion, excited for the challenge.

Percival hopped off the bus and took a walk to the apartment where he would be staying. He was carrying a suitcase and a backpack. Percival preferred to pack light and buy anything else that he would need on arrival at the destination. In his opinion this made travel a lot less stressful - nothing worse than having to look after a lot of luggage on a long journey, and then having to lug it along everywhere you go. Packing light was something he learned from his mother Grace, who was the master of packing light - it's almost as if in a past life she was a nomad who frequently travelled and became an expert at it. But, she was just an accountant. Perhaps it was the accountancy that conditioned her to be so pragmatic, he thought. A homeless man approached Percival holding a pan and asking if he had any coins to spare. Percival decided to first drop his bags off at the apartment, if the homeless man was still around when he went to the shop later that afternoon, he would get him a sandwich and a bottle of water. It was a hot afternoon and by the time Percival reached his apartment he had broken a sweat, so he took his jersey off and turned the air conditioner on. He lived in a small bachelor apartment about one kilometer away from campus. His apartment complex was typically used by students, but also had

tenants who were not students. The apartment complex had study rooms and a communal swimming pool, as well as charging bays for EV's, robots, drones and rovers. The city was vibrant and tech savvy; it wasn't uncommon to see rovers roaming the sidewalks on their designated rover lanes, or on the main pavement picking up litter sometimes, or to see robots working at construction sites or picking up packages from autonomous delivery vehicles. It wasn't too long ago when the city was abuzz with the sound of drones in the sky. At the time there were regulations regarding the times that drones were allowed to fly, to ensure that people could sleep without the sounds of buzzing in the night and early morning. Now the technology had matured and drones were far more quiet, following the sky lanes which had been written into their programming to dictate where they could fly. A self managed air traffic control system was placed in different parts of the city powered by supercomputers and nifty machine learning algorithms. On Special holidays, the engineering department would get its freshmen to design elaborate drone shows for extra credit. It was great to be back in this city - and now Percival finally had a foot in the door at the prestigious university that built it all.

3. Nameen

Life is cyclical- riddled with ups and downs, highs and lows, rises and falls, wins and losses. We can either spend our whole lives running from the inevitable downfall, or trying to soften our falls, or we can embrace both the peaks and the troughs of the cycle, and find the value in each. Now the person who learns to lead in the darkest valley, and on the highest mountain top is the person who has mastered the dance. Life is work and rest. If you rest well, you can work well, and if you work well, then rest will come easy to you. Nameen knew all too well the duality of life. She thrived in it- because she learned to adapt. She evolved herself through trials of fire and water. She learned this from her mentors. Hiramius taught her the architecture in all things - the perfect design, forged in struggle and strife. All of life was like a remarkable building, whose features were the result of constraints imposed upon them. Now the building which adapts to its constraints, whose architect is wise enough to listen to the signs of the times, stands strong- the building which does not adapt, crumbles. She was taught to see herself as a building - one which she was the chief architect of, and which she would spend her entire life building for others to live in when she leaves. Legacy. Maeve, a great seamstress, taught her the intricate tapestry of a life well lived. Weaved together by the interplay of our decisions and the passage of time. Nameen's music teacher Esther taught her rhythm and harmony - and so it was that Nameen learned the dance of life, and found herself in a

mysterious refrain. She stopped to listen carefully, to look around, to draw out her building plans - to gather together her wools and choose her colors. For the first time she was called to employ the wisdom she had acquired over the course of almost two decades. It was better for her than for others who never had the training. The world was changing, and her parents knew it. Alethea was nearing a turning point, and yet her inhabitants carried on with their lives as if they were none the wiser. A great strategist, her mother viewed the world as a chessboard on which one had to be shrewd as a serpent and as innocent as a dove. A great unifier, her father viewed the world as an intricate web of relationships, whose weights one had to strengthen in tandem with the ideal that one was striving for. Nameen's parents, Archibald and Io, grew up in the great war for the African continent, out of which the Union of Alethea emerged the victor. They were somewhat cold and calculated, as a necessity of survival in the times they grew up in, but they showed their compassion by affording their daughter with opportunities they never had - most significantly the opportunity to prepare for every great turmoil that life presented. They saw that the greatest danger one could impose on their children is too much comfort. The world is at peace momentarily, but this is not to be taken as the norm - peace is the exception! They felt obligated to raise a warrior, capable of weathering the storm when it came, and most importantly, capable of leading others out of it. From a young age they had her trained in both physical and mental strength. And for a time they gave her the comfort of a myth to believe- to impart morals and values onto her, beyond what she could learn from her life as a youngster. But as she grew old enough to comprehend, they gradually revealed truths about the world to her, and as she comprehended she grew weary. Now with the comfort stripped away from her, she was to survive. Her

parents travelled with her to their family situated in a small country in the South of Africa, now called iNgwenyama. The country along with the rest of southern Africa was in ruins after the great war. Warlords ruled and poverty was pervasive. Sorrow filled the land. With no formal economy, a form of feudalism had developed. People lived under the protection of families with land and resources in exchange for their labour. Warlords waged battles against these fiefs, using arms acquired from foreign militaries, illegally. It was in the interest of the Union's national security to develop these fiefs further and to stifle the illicit arms trade before the violence spilled over into the Union, which was in relatively close proximity to the South. It was Nameen's Aunt Rosa who was the soul of the family. She was the one who encouraged Nameen's training to include aspects of both philosophy and the arts. Aunt Rosa used to be a singer and a jazz pianist in her youth. She would play for the soldiers at bars and she was called to sing at the Union's first national events after the war. She worried about the consequences of raising a child like a warrior. A child was a child - they needed to be shown the virtues of compassion and care. Nameen's parents loved her, but they showed their love in a different way than most parents. Both being employees of the Alethean Union's government, they saw the world with a greater degree of clarity than the average person and being survivors of the great war, they saw the value of having a Union differently. They may just as easily have found themselves in the South, where the turmoil never ended. They needed to protect the union that they had, at all costs. Nameen saw it differently. She saw a deeply unequal world, as sheltered as she was from it. Her parents prioritized the Union, but she longed for the pan-African vision that the founders of the Union had in mind. Her parents used to believe in this - they grew up with the founders and lived through the war with them - but

perhaps, Nameen thought, the comfort and the safety that they grew accustomed to in having a stable nation to live in had made them averse to the idea of saving the rest of the continent. The world spun on, in its rhythm - the ups the downs, the highs the lows - 'Just dance on, even when things seem uncertain' - Aunt Rosa used to tell her when she struggled with her training. She imagined herself dancing up a spiralling staircase. Each step brought her to a higher place than before, but it all looked and felt repetitive - until she reached the top floor.

Nameen was doing some high intensity interval training, with a twist- she was running on an omni-direction treadmill, and would need to switch running directions at different intervals to improve agility. Nameen's endurance was above average for a person her age, and her dedication was that of an athlete in training. Her speakers were playing some vintage ReignWolf. The drums, the riffs, the intensity of the vocals kept her in flow- every step she took was one step towards what she saw as her destiny. A protector of the people. Her father stepped into the room. "You know it's okay to take breaks right?". She had her phone attached to her arm, and she tapped it to pause the treadmill and the music. "The bad guys aren't taking breaks..." she said slightly out of breath, but laughing. "Everybody needs to take breaks Nams, there's no strategy in burnout" her dad replied. "So have you changed your mind about going to University - I really think it would be good for you to be around people your age group instead of trying to save the world." her dad asked. "I know I can't save the world dad, but it doesn't hurt to try to make it a bit safer." she responded, "Plus, these warlords are really starting to gain traction, if we don't start rebuilding the South soon, even the Universities won't be safe - you know that's where they start their influence campaigns - on campuses, where all the smart and talented people are." Her dad was concerned.

Nameen was a well intentioned, good child, but much like her parents, she had a savior complex. “Nameen, there are people whose job it is to handle these things. I already told you, you don’t have to follow the same path your mom and I took. We were living in a completely different world. You’re free now, there are no great dragons to slay anymore. You should be living your life, meeting people.” he said. “Yeah well, you and mom also said it was my choice - plus if I can showcase my skills, maybe Minerva might have a job for me, and isn’t that the whole point of going to University - to get a job?” Nameen rebutted. “No- that’s actually not the point of going to university - but I think you know that already, you’re just being difficult. Anyway, breakfast is ready.”

4. Santi

Every person has a devil within them. Sometimes it rears itself in the most conspicuous of ways, and sometimes in more subtle ways. The devil Santi chose to live with was that of blissful ignorance. She only needed to know what she needed to know to get to where she needed to be. As for the rest, she left it to the ether to feel and empathize for. It wasn't that Santi was sheltered from the truths around her, or that she viewed herself as being above them. It's only that she knew all too well the despair of knowing the extent of the evils around her and what little control she had over the evils. Santi was her full name, it was not short for Santiago, which was a male name. It was simply Santi. Santi struggled with the problem of not being able to save; of not being able to save her sister when they were taken by child services into foster care and they were separated by the system, of not being able to save her biological mother from her struggles and her broken ways, and of not being able to save the world from its march towards self destruction. She was an avid mathematician and she also performed well in physics class in high school. She graduated with a 4.3 GPA and she had just received her acceptance letter from the University of Alethea, one of the best universities in the world, to study mechanical engineering. The grand calculus that ran in her mind was that, perhaps, if she just focused solely on achieving her goal of becoming an engineer, she would finally be able to build wings for

herself and live up to her name (figuratively of course). Her name was the great irony that plagued her- because to know the meaning of one's name imbues one with a certain sense of responsibility to live up to it and yet, she could never quite live up to hers - or so she felt. But maybe that would all change from now, she thought to herself in her solace. Santi was adopted by two great parents who helped her excel through school by providing her with all the resources that she needed to succeed, including an engineering work desk which they situated in one half of their garage. They only had one car, so they figured that they may as well give the other half to Santi to build her projects and to experiment. In 8th grade Santi built a mechanical bird with no electrical components, made of wood and strips of thin plastic film and powered by steam, like that of Archytas of Tarentum. One day she ran into the living room of her house yelling, 'Mom it flies, it flies!'. She built this in her bedroom over the course of months, quietly, without telling anyone, only boring bits and pieces from her dad's woodworking space. She was inspired by her adoptive father, who made a chair and a table for her room from scratch and showed her the entire process when she was younger. Sense of control. Making things was where Santi felt a sense of control. Everything else was subject to the winds, but one thing that wouldn't blow away was the ability to take from mind and turn into matter. On Friday's Santi enjoyed baking Challah bread with her mother for Shabbat, as well as on occasions of Pesach. She enjoyed the little moments, saying Shema at the dinner table with her mother and father and watching the discovery channel with her father, where she learned about some of history's most impressive works of engineering. Now for the first time she was going away, to go and start the next phase of her life. She was excited for the freedoms that university would bring, but felt a great bout of

nostalgia for those little moments that she would have to leave behind for some time. Santi's childhood friends were Robin and Seth. Robin wanted to go to Europe to study and Seth chose to travel west to study in the United States. Santi would send Robin sketches of new ideas that she wanted to create using her MarginXR pad, provided by her school. She could sketch onto the pad, and artificial intelligence the sketch from a 2 dimensional sketch, to a 3 dimensional design that was viewable with augmented reality glasses and floated above the pad. She could expand, rotate and make alterations to her initial model from here, and make something of a twin of the model on AutoCAD. Her high school had purchased AutoCAD for all of their students to use on their MarginXR devices at home. Being a school focused on STEM education, the academy wanted to provide students with everything they needed to create even outside of the classroom. Robin would send ideas back and they would discuss how they could improve on the ideas and what future iterations of the device might look like. They would discuss their engineering dreams and the steps they would take to get there. Robin wanted to go and study in Germany and get into electric vehicle engineering. She was inspired by the early works of HydroWagen in the 1980's. HydroWagen developed the first hydrogen powered vehicles in 1982 and by 1990 these vehicles were widely used with the second most used alternative being lithium powered electric vehicles manufactured by Nyumba's Ignis electric vehicle company, a company which still exists globally even after the great war. The history of Nyumba's electric vehicle production was riddled with scandals and atrocities, with Ignis having exploited laborers and resources from the Jazirat Alsukhur, a large Island of the southern coast of Africa. They were said to have forced the inhabitants of the Island into indentured labor and the Nyumba regime had even

been known to take the inhabitants of the southern African islands as slaves during their mass manufacturing of robots, war rovers and drones. It was the exploitation of labor that had led to their military dominance in the region. Frederico Alvez, the leader of the Unified Republic of South America, appalled by the Nyumba regimes war crimes made a call to action at the UN security council, demanding that the leader of Nyumba, Alphius van Staaden be arrested and international security forces as well as a coalition of forces from around the globe be sent into Nyumba to and the nationals which it had occupied to bring an end to their military campaign. But the Nyumba regime, having control over a vast majority of the world's lithium reserves, was too vital of an exporter to many of the member nations of the security council for them to take serious action- the world as it were, was powered by electric vehicles and lithium was a key resource. They either all had to commit to winning the war against Nyumba, or they had to compromise, and most nations chose the latter. But that doesn't mean that the Alethean liberation army was on its own in fighting Nyumba - in fact this was far from the case. Many nations which were publicly neutral to protect their own interests, were helping Alethea behind the scenes. Providing weapons and deterrence technology and sharing vital intelligence with the liberation army regarding Nyumba's future plans. Naturally, people began to see HydroWagen as the ethical alternative to Ignis vehicles during the war, and the company had taken its position as the leading automotive vehicle manufacturer. Robin, Santi and Seth spent a lot of time discussing the history of technology, since history is a good indicator of where technology might go in the future. Now Santi was in a stage of her life where she could finally play a part in building that future. Perhaps her works in this moment would

be looked back upon by curious minds in the future. Only time would tell.

5. Flowers

Praetorium

6 November 1999

10:45 am

“A bouquet of flowers please.” Io said to the lady working at the counter of a flower boutique on the corner of Ngwenya street. “Of course, what in particular are you looking for?” The lady asked. “Something for a funeral.” Io responded. The lady reached underneath the counter and pulled out a bouquet of orchids. “My condolences.” She said, handing the flowers to Io. Io took the orchids and walked out of the flower boutique. As she walked out she looked at the building opposite to where she was and saw Alphius van Staaden’s face plastered across the walls with his famous slogan, *I will lead us back home* in blue and orange colored text. Io proceeded down the street and made her way to Prospect Park, situated at the center of the capital city, Praetorium. When she arrived at the park she sat at a bench facing the park’s reflection pool and waited. It was winter, and although it had not begun to snow yet, it was cold enough that the reflection pool was beginning to freeze over. At the bottom of her wedding ring was a button, she pressed it, waited 3 seconds

and then blinked twice. Some blue text appeared in her contact lens telling her to wait until she had made contact with Blue. After a few moments a woman wearing a blue jacket came and greeted her. Io stood up to give her a hug. “Hey you!” Io said, “Hello my love, it's lovely to see you again. How long are you in town?” The woman asked. “I’m only here for a week to visit my aunt.” Io replied. “Well you certainly chose the coldest time of the year...” The woman said with a laugh. “People always tell me to visit Praetorium when it snows... it’s beautiful they say” said Io. “It is indeed. Oh and you brought flowers, are those for me?” The lady asked with a great smile on her face. “Yes they are, happy birthday love! You get younger every year you know!” Io handed her the orchids and said, “I hope you like them hun.” “I do, I love them! I’m going to keep them in my office as a reminder to call you... I always forget to keep in touch.” The lady said before she gave Io another hug. “I need to rush off, I promised my aunt I would pick her up at eleven o’clock, I’m already running late...” Io said with an expression on her face of sadness that she had to leave her friend so soon. “No worries darling, it was lovely seeing you. We’ll meet again sometime soon.” The lady responded understandingly. “Yes we will, take care my love!”. Io gave her friend one last hug and then walked towards the train station. Another message popped up on her contact lens saying, “Return to the safehouse”.

7 November, 1999

16:00 pm

“This just in, we have now received news that traces of an internationally banned nerve agent were found in the blood samples of the renowned Quantum Computer Scientist Dr. Archie Belgaaren, who was found dead in his apartment

yesterday afternoon...” The news anchor reported before a tall man wearing a brown leather jacket turned the tv off. “We’ve delayed them for four months at best, but we need to hurry back to HQ to let them know what we learned about Tachyon before the Nyumba Security Services learn about the flowers.” He said, excited that they had managed to pull their plan off successfully, but still anxious because it was far from over. “Uncle Nyumb’s moves fast so we need to clean up and get going. I’ve taken out the trash, you can call in the Whale.” Io replied. Io and Archibald were stationed in Praetorium, Nyumba at the beginning of 1999 and were running a black operation to prevent the regime from decrypting the Alethean Liberation Army’s communications with their new Quantum Computer called Horus. The Alethean Liberation Army was in possession of a slightly older Quantum Computer and they worried that their encryption algorithm would not hold up long enough for them to make the critical communications they needed to make to gain the upper hand in the war. Only 10 years ago, the idea of decrypting a quantum encryption algorithm was unheard of but the Nyumba regime, having made significant breakthroughs in materials science, had made huge strides in the field of Quantum Computing and were now leading the world - and trying to invade most of the world with their power too.

6 November 1999

11:20 am

Blue arrived at the Melroch Hotel where she was staying with her lover, Dr. Archie Belgaaren. She had recently received a fresh bouquet of orchids from an old friend as a gift, and she needed to take them back to the hotel suite before she could go on her lunch date with Archie. “He will lead us home!” She said, greeting the hotel clerk with the Nyumbaen national greeting

while placing her hand on the right side of her chest, which was the corresponding national gesture. “He will lead us home!” The hotel clerk responded, with his hand on the right side of his chest. Just as Blue made her way to the elevator she saw a man being arrested by NSP officers. She looked away quickly and proceeded straight into the elevator. Ground Floor. First Floor. Second floor. Third Floor. Fourth Floor. Fifth Floor. The elevator doors opened and Blue exited the elevator and walked down the passage to the room she was sharing with Archie, room 512. She opened her handbag to grab her access card, pulled out the access card and opened the door. She took a deep breath in. This would be the last time she entered this hotel room. When her and Archie return from lunch, she will tell him that she needs to make a quick stop at Aphrodite to pick up lipstick that she had ordered. It was not in stock the last time she went looking for it, but she was told it would be back in stock today. Archie being the van Staaden loyalist that he was, had left the Nyumba National News channel playing. “...The west is well aware that President Alphius van Staaden is the greatest president that this nation has had, but they insist on propagating lies about him on their media platforms because they are compromised and weakened by the slave morality that they choose to live by. The Nyumbaen people are strong in every way, and it will be us under the leadership of our great President, who will lead Africa home into the continent that it is destined to be...” Blue turned the tv off. She took the bouquet of orchids and placed them on the bedside table. Her contact lens augmented a video display and a control panel. The video showed the camera feed from the cameras that were placed earlier by the room attendant who had cleaned the room earlier. They had managed to turn her in exchange for her and her family being taken out of Nyumba and placed under protection in the slowly growing Union of Alethea. Since the beginning of the

operation in January, Blue and her team had developed 5 more assets in the region in an attempt to slow down a secret Nyumbaen operation called Tachyon. Their attempt would be successful if today went off without a hitch. Nyumba checked that the orchid's receiver was active before leaving the hotel room to meet Archie for lunch.

6 November 1999

13:15

Blue exited her cab, walked into van Staaden Mall, and made her way into Aphrodite. She first took a look at the perfume section, and sampled some perfumes that she was interested in buying. The first fragrance she tried smelled like blackcurrant, pear and jasmine - it had a beautiful scent, but it wasn't quite what Blue was looking for. The second had the scent of rose as well as a musky scent and a slightly woody undertone. But it was the third one which really caught her fancy- called Olympe No. 3, which had a timeless scent of citrus, jasmine and rose. She took the perfume and walked to the counter where she greeted the cashier with the national greeting, "He will lead us home." Blue said. "He will lead us home." the cashier responded. She was not familiar with this cashier and asked, "Hey, do you know if Anette is in today? She was helping me with an order last time I was here. I just wanted to check if it's arrived." Blue was anxious, this was not part of the plan. "Anette called in sick today, but she did say she had a customer who was coming to collect lipstick today, is that you?" the cashier asked. "Yes that's me, I was here to collect Athena Red." Blue responded. "Great, it's in stock. Let me go and get it for you." the cashier replied and made her way to the back room. As Blue waited, she grew anxious about what may have happened with Anette. Did she get cold feet? Was she burnt? A million questions began to race through Blue's head,

but she kept her composure and refocused her attention on completing the task at hand. “Here you go.” The cashier said as she handed Blue the Athena Red. “Thank you!” Blue said as she took her items, left the store and made her way to the underground parking. She looked for an Ignis van with “Arendts Repairs” written on it. When she found the van, she clicked a button on the side of her wristwatch and the car's rear door unlocked. She found Archibald sitting in the back of the van and Io sitting in the driver's seat and closed the door. “Everything went according to plan?” Archibald asked, reading the worry on Blue's face. “Anette didn't show up for work today, we might be burnt. I didn't want to risk activating the device if it's been compromised somehow.” Blue responded. “Oh no, please tell me you didn't bring the lipstick with you...” Archibald said, placing his hands on his head. “I had to, we can't exactly abandon the whole plan just because one detail went wrong.” Blue said. “Agreed. Okay hand the lipstick to me I'm going to check if it's been bugged, if it has been we need to ditch the van and you need to reattach to Belgaaren.” said Archibald. “What's going on?” Io asked from the driver's seat. “The asset didn't show up, but the device was there. I'm guessing maybe she got cold feet and didn't want to follow through with the extraction.” Archibald responded as he broke the lipstick apart. “It's just strange because she seemed ready for her part the last time we spoke. I wonder what changed...” “We'll have to cut ties because we literally have no time to look into it, Whale breaches at seven o'clock tomorrow evening.” Io said coldly, knowing that these were the kinds of errors that could bring down an entire operation. “No bugs, and the device seems as if it's still working.” He stopped for a second and let out a sigh of relief. “Okay, Blue please check if Billy is still green.” Blue blinked twice to turn her contact lens augmented display on and twisted the crown of her watch to

check all the camera views from the hotel room. The Belgaaren was, completely oblivious to everything that was about to happen. “Billy is green”. Archibald twisted the lipstick three times and Blue got a notification on her control panel display letting her know that the device had been activated. After about one minute, Dr. Belgaaren began to choke, and after five minutes he had passed out. The orchids emitted a neurotoxin that would quickly neutralize any target who was exposed to it. Blue turned off the display and the team drove out of underground parking, and to the florist to pick up their asset. Extracting the assets was a risky choice, but the Nyumba regime was extremely well versed in their counterintelligence and in this case, it was more of a risk to the operation for the assets to remain in Nyumba. The Alethean Liberation Army, in partnership with a few states that would soon join to form the Union of Alethea, offered these assets a safe life in the Union in exchange for their cooperation. The assets were chosen very carefully - all of them were from ethnic groups which were currently the target of van Staadens propaganda, which was deeply intolerant of people who were not from the ‘mother culture’, the “Volke”.

7 November 1999

18:00 pm

“Where’s Blue? We need to get to the docks soon, Whale closes doors at 19:30.” Archibald said in his normal composed tone, although you could tell that he was anxious to move to the Whale and leave this safe house. The Whale would be our safe house for the next few days as we travelled home by sea through the Indian Ocean along the east coast of Africa. It was a safe house filled with all the amenities, including a week’s worth of oxygen and air conditioning. The Whale was composed of two shipping

containers stacked on top of one another, and it was padded for sound proofing and for aesthetics. The Whale contained a weapons depot, four desktop computers, a portable quantum computer for secure communications, a couch, 3 beds, a kitchen and a toilet. The intelligence wing of the Alethean Liberation Army was called The Minerva Group. The Minerva group had turned assets in the shipping industry as early as 1987 and had long secured discrete sea routes for their operatives to easily enter in and out of Nyumba, with the help of other intelligence agencies who had a common interest in removing Alphius van Staaden from power. van Staaden's reign had lasted twenty-five years, and in the last fifteen of those years, he had managed to successfully invade 8 countries in the Southern half of Africa. Aside from committing numerous war crimes, the last straw for the international community was his signing into a law a requirement that all Nyumbaen citizens were to become cybernetically enhanced by the age of 12, to boost economic productivity. He actually enacted the plan, and despite his forcing cybernetic enhancement on the entire Nyumbean population, he still managed to garner a strong following of people who liked the idea of being superior in every possible way to other humans. Another case of a strong-man leader taking Nietzsche's philosophies too far... The world as a whole was not against cybernetic enhancement, but there was a general consensus that more research around safety and ethical implications was needed before mass adaptation of the technology. The ethical framework included a clause on ensuring that under no circumstances would civilians be coerced into becoming enhanced. van Staaden himself used to be a member of old Nyumba's intelligence apparatus, and his rise to power was a direct result of his use of information as leverage to gain funding for his first election campaign. He mastered the political system and made sure that once he got

power, that power could not be taken away from him. He essentially made himself a king, and Nyumba's democracy fell.

Blue walked into the safe house with a bottle of Nederburg wine, and Io asked "Is that another contraption from Vim?", "No it's just wine." Blue responded. "Oh so we're extracting some information from someone?" Io asked again. "No Io, it's literally just wine, for us to drink and celebrate...". "Can't celebrate yet, we haven't made it back to Psarionopolis in one piece yet." Archibald replied, "Oh my god I work with actual robots... no guys we're actually celebrating. Do you know we missed Christmas and New Years working on this operation? Nothing's going to happen if we just spend one night playing monopoly, eating cheetos and drinking a glass of wine." Io thought for a moment and then said, "You know what, I actually agree. But I'm dj-ing though." Archibald laughed, "Look I don't disagree, but you know we'll probably be the first operatives to throw a party in the Whale right?" Io rebutted, "There's no way we are the first, the Whale's been around for a while now, those 70's operatives knew how to party. I heard they once got drunk with high ranking members of the NSP during a back door negotiation.", "That could not have ended well..." Blue responded. "It didn't, it ended in a gunfight and the back door negotiation went bust. But they were going to refuse it anyway, so I've got to give it to that generation, the confidence levels have to be insane." "Okay, shall we get going? The clean up crew is going to get here soon to do a wipe and burn." Archibald said. "Yeah let's get going." Blue responded with a shared sense of urgency - although it was not clear whether the urgency was for safely moving to Whale or partying.

6. Parts and Wholes

Professor Wandile Gaunt was wearing a pair of boots, jeans, a tee, a dark grey boucle coat, a pair of SpectXR augmented reality specs and a backpack. He put his MarginXR pad out, as well as a physical keyboard, and placed them on the lecture theatre's podium. Gaunt liked the tactile experience of typing with physical keys and the sound they made - it made the experience of writing code, and writing in general, feel more organic. It reminded him of when he was a youngster, and keyboards were still attached to laptops. Now of course, everything was mixed reality. He pulled out a pair of haptic gloves and put them on. He navigated to the AutoCAD project for today's lecture and as it opened up, he proceeded to introduce himself to his class. "Good morning! My name is Wandile Gaunt, and I will be teaching you the Fundamentals in Quantum Age Mechanical Engineering. As you know, all the resources used in your classes are accessed through the cloud, and are being run by a number of on-campus quantum computers. In engineering, this allows us to explore multiple possible states of a mechanical system concurrently - basically, we can test a bunch of different functions of our mechanical device, all in one go, and see with a high degree of precision, what went

wrong, what went right and what can be improved. Now if you would all take a moment to put on your SpectXR glasses if you haven't already - yes I know some of you are still normal humans and don't wear your SpectXR's everywhere you go...." The class laughed and enjoyed the professor's apparent wit. "Now once you have them on, I want you to take a look at something. The model you should see in front of you is of a commercial drone from the 70's. Now if you use the split gesture you can break the drone down into its individual components. This will be very useful in this instance because there's one component in particular that's giving us problems - now AutoCAD has already run a simulation on this drone, and it's discovered something wrong with the rotor. Who can tell me what it is?" The professor asked as he scanned the room for any hands lifted up. He looked at the front row and a young man wearing a grey sweater had his hand lifted up. "You in the front row, please introduce yourself to the class and then do your best to explain the issue here." said the professor. "Hey all. My name is Artero. So the issue I see is that the rotor is made of a material that's not optimal for durability, and so over time this material is prone to wear. If we run an analysis on the rotor component we'll see that it's made up of generic plastic and it's been molded into that shape, but we could cut down on weight and improve durability if we swap out the plastic material for graphene." Artero suggested. "Wait, let me stop you right there. So you're not wrong - but to delve a little deeper, we need to first consider the torque of the rotor. When we compare the torque of the rotor to the mass of the drone, it's not enough to give the drone lift beyond say, half a meter above the ground, and even if you get lift, this is going to consume a lot of energy to sustain this. So yes the material of the rotor, but not just for durability, also for an increase in torque. So let's swap out the material being used on this component for graphene."

The professor used his haptic gloves to drag and drop a new material from the material's panel, into the component's material slot. In an instant component's statistics changed and AutoCAD prompted the professor to rerun the simulation. "Artero, you do the honors since you spotted our bug." said the professor. Artero ran the simulation and the drone rose from the ground one meter, then two meters, then three until it eventually hit the 8 meter height target. "All tests are passing. Well done Artero." The professor said, seeing promise in this student. His intuition was quite good for a beginner engineer. He must have had some prior experience, the professor thought. Santi was hoping to set up a study group with some of the students from this class, and Artero was probably somebody she should make an introduction to, she thought. It didn't hurt that she also found Artero quite attractive. He was well built, and yet, not so much that it looked like a forced look, just a natural build and stature. He seemed like he had a solid head on his shoulders, but was he a decent person?

After the lecture ended, Santi approached Artero and asked, "Hey, you seem to know a lot about engineering. Let me guess, child prodigy?" "No child prodigy..." he said, letting out a momentary laugh. "My father was an engineer, I guess I picked some things up from him." "Ahh, that makes sense. What type of engineering work does your father do?" and then she realized that when he mentioned his father, he mentioned him in the past tense "Or did he do?" "Naval engineering. Hey I've actually got to run, I have an Analysis lecture now on the opposite side of campus." He said, trying not to come off as rude, but still with a sense of urgency. "But uhm...I'll see you in Calculus right?" "Yeah defs." She said, "See you later." He was taking Analysis so he must have scored high in math either in high school or in his entry exam, Santi thought to herself. That course was quite

selective, only 15 students could take it at a time. And his dad was a naval engineer, so Artero's probably got everything he needs to do well in this course, she thought to herself. Santi headed out the lecture theatre's door into the Phillip Otieno hall, and before she made her way out of the hall, she activated Campus GPS on her SpectXR glasses, and asked it to direct her to her tutors office. Her Tutor was a third year student named Karabo Sello. Karabo was a tall young woman, with braided blonde hair and hazel brown eyes. She dressed fashionably, wearing a brown coat, a white polo neck jersey, navy blue jeans and heels. Santi had done her research and saw that Karabo was a key contributor to the campus tech magazine called *Future Alethea*. She specialized in hard-tech and materials science, and her writing was a golden ratio of style, logic and simplicity. It took Alethea a few hours to get through the readings that Karabo had sent to her tutees this week. A relatively simple start she thought. The readings covered first principles thinking, systems thinking, modularization, and running diagnostics on AutoCAD. All things she picked up in today's lecture. She was prepared as she could be for her one-on-one meeting with Karabo, but she wanted to make an impression, so she read a little further into the curriculum hoping she could ask some questions about the term project. She followed the GPS directions to her tutor's office which was in the Vusweni building, positioned opposite to the admin block. The Vusweni building was a wood-panelled slightly slanted stack of buildings, where each consecutive story of the building was shifted about 10 meters to the right, with a roof garden to the left. Santi walked in and took the stairs to the second floor. As she walked up the stairs, she was captivated by the beautiful interior design of the building. A combination of nature and technology, with wood panelling, a lot of plants and rectangular fountains, and

augmented displays as well as transparent screen displays showing information about the history of the university. Robots walked around the building and rovers drove in the rover lanes, driving out of the building to deliver documents to other parts of the university. Tranquil music and a calming voice welcoming people into the building, and orienting them to the different features of the building created a beautiful soundscape. All the parts contributed to the whole - the beautiful modularity of great design. As Santi reached the second floor, she stopped for a moment to take it all in. She had finally arrived at the place she had hoped to study when she was a high school student with dreams of building things that could really help others. She finally had in her sight, the opportunity to focus outwards and piece her life together.

7. A Stark Contrast

Regeneration or renewal requires an honest reflection of oneself. The mind is willing in part, the ego is the only obstacle, but if one can muster up the strength to see themselves under the unfaltering light of truth, one can free themselves from their disposition -because, as it were, they know the condition and therefore they can find the medicine. Nameen knew this was the final challenge and the great filter that would decide whether she could embark on the same path her parents did. Her parents' work for the Alethean Union was classified, but she had an idea of the general details. The difference between her and her parents was stark. She had grown up in a shell of protection. Of course this was a necessity given the nature of her parent's work; Io and Archibald had done everything in their power to ensure that she wouldn't have to pay for the choices that they were forced to make in their youth. They also wanted her to have a choice. They weren't comfortable with the idea of Nameen working in the field, but she showed an interest in helping the South end the violence and rebuild from a young age, and she

had initially wanted to join the military to help the Union achieve this goal. They weren't comfortable with her joining the military, so they let her in on the surface details of their covert work during the great war - nothing they weren't allowed to share, but just enough to give her an idea of how dangerous it all was, but how rewarding it could be as well. Nameen had certainly been well trained from a young age, being fluent in 7 languages, being physically fit and a natural athlete and also being incredibly intelligent. She had almost everything she needed, but she had never had to endure any real struggle in her life. She was privileged. Her trip to the South was all about overcoming this privilege and being exposed to the real dangers of the world.

Percival is another individual whose number one obstacle was the high level of comfort he had grown accustomed to in life. Without ever having struggled to attain anything, he was not well positioned to take on the world. He wasn't spoiled, but he was privileged. Luckily he was self aware too. He needed to find a way to break out of his cocoon, but a part of what held him back was his fear that he was destined to be a moth and not a butterfly. So he indulged in the comfort of the cocoon, waiting until he was 'ready'. The world didn't work this way - it was not so kind as to afford you the opportunity to take your time. Time moved forward relentlessly. He needed to transform himself in a radical way if he were to catch up with the time that he had lost wandering about, with aim, and yet without a sense of focus. His efforts were like that of the novice archer with no eyesight - certainly not doomed, but needing special attention to refine. He needed to strengthen his other faculties to support this goal. He was, at least, creative. An artist at heart, his venture into the realm of data wasn't so much of a departure as a reorientation into a different paradigm of creativity. His mother, Grace Otieno

was an accountant for one of the most acclaimed technology companies in the world, Conjunction. His mother was a pragmatist, with an incredible talent at focusing on the tiniest of details, not just in her work but in all areas of life. Percival never inherited this trait. His mind was a strange place, where focus took a secondary role, and creativity led. Although his artistic works were certainly signposts of a certain attention to detail, he just didn't realize this until he discovered his aptitude for data science later in life.

Blue sat at her desk analyzing financial statements for the company Conjunction. Although being an accountant was challenging and rewarding in its own ways, Blue missed her old job. But the war was over. There were no real dragons to slay. Warlords were on the rise in the South but it was being handled by a younger generation of covert operatives now. She could have taken a desk job and just been a suit at Minerva, but being back in had the risk of complicating her son's life, which she didn't want for him. She wanted Percival to have an ordinary life, lived at his own pace. She was glad that Percival was a creative and he was nothing like her or his father. Blue missed the thrill - the high that one got from walking that tightrope of covert intelligence. Blue missed her old identity. She missed being Blue. But she was no longer Blue, Blue had left the field 28 years ago when she gave birth to the most important person in her life. And as much as she wanted back in, she was committed to waiting it out until she knew Percival was ready to live independently. For now, Blue had to be Grace.

There was one thing that haunted Grace; Arthur, Percival's father. Arthur was about to go into retirement when someone in Minerva had leaked the information of thirty covert operatives

who were active in the field in 2002. Grace was pregnant with Percival, and she had just retired, so her files had already been completely removed from Minerva's systems, which were protected by Quantum Encryption algorithms from the early 1990's. This wasn't enough to protect against the Nyumba Regime's quantum supremacy, and this blindspot resulted in the leak that got Arthur Otieno assassinated en-route from a mission in the archipelago south of the African continent, called Simunye. Grace couldn't look into it because she no longer had a high enough security clearance, but there was one last option. She gave her old colleague Vim a call. Vim provided all the tech that Minerva used on its missions. She didn't have clearance, but Vim was still in, he worked a desk job as mission support now and trained the new techies. If she called Vim, he might be willing to look into the leaks and close up any remaining loose ends that might implicate Grace. She knew the most efficient way to reach Vim was through the encrypted chat app that he had built her team when they were on in the Indian ocean. She still had the chat app on a USB that she kept in a hidden compartment of her bedroom drawer, where she also kept two pistols and their silencers as well as five throwing knives. You could never be too safe, especially coming from the world that she came from. Grace packed up and left her office for the day and took the elevator to the underground parking where she parked her car. As a precaution Grace always stood a distance away from the car when she pressed the unlock button. Knowing what she knew was both a gift and a curse. A gift because it kept you prudent of important details that regular civilians might miss, and a curse because it kept you somewhat paranoid. Situational awareness that doesn't turn off when you've turned it on. She got in her car and headed home, knowing well that she was lucky that fate had not caught up to her on this occasion.

8. Alphius

What's the difference between trying to change the world and trying to gain power over it? Both seemingly require one to attempt to bend the world to their will. Both are an attempt to shape the world into an image that we believe is best, truest, most virtuous. All of these assumptions rely on the initial assumption that we can, in any way, know what's best for not only all of humanity, but all life on Earth. What's certain is that the initial assumption is incorrect. We can't describe in absolute terms what the world needs. To assume that we can know this is our greatest arrogance. So then what do we do about the world? What do we do about the evils and injustices in it? The tyrant learns of the boundary that we've just described, and crosses it anyway. The hero doesn't attempt to be master of this world, but first and foremost, a master of himself. And then when he has mastered himself, he accepts others as they are and does not attempt to shape them into his image. Then and only then can the tyranny of power be avoided. Alphius van Staaden performed poorly in school, and soon after was sent to the military by his parents, where he trained to be an airforce pilot. He struggled to

keep up with the rigorous training regiment, and found himself at the bottom of his class, and soon after was sent home. On returning home Alphius van Staaden made friends with a technologist named Albie Maarten, an exceptional individual with a fanatic interest in cybernetic technology and transhumanism. Alphius was intrigued by the possibility of self overcoming that this new technology presented. To be able to augment oneself opened up the possibility for one to become more than themselves - and this Alphius loved. No longer was he imprisoned by the seeming randomness of the genetic dice roll that, in his perception, was the cause of all of his misfortunes - no longer was he a slave to his weaknesses. To Alphius, the concept of becoming post-human was a great equalizer which would finally turn the tables, not only for himself but for his nation. His deep insecurity was fertile ground for the seed of the promise of self-augmentation and posthumanism. He envisioned a world ruled by those who were brave enough to integrate technology into their bodies. But this ambition alone was not what finally turned him into the man he would become - it was what he did next that truly shaped the man. Alphius spoke of a new Africa, finally freed from the tendrils of foreign oppression and for him the only way that this could be achieved was by the reinvention of the people into the perfect human, through cybernetic enhancement. The falsity lay in the premise, however, for Alphius to have understood that he would have first needed to know himself, and the deep seated roots of his actions. The sense that he, being himself, was not enough, was based on the delusion that because one fails, they have rendered themselves invalids within society. Implying that said society was itself without error to begin with, which is false. In fact, not just in society, but even the most seemingly perfect and symmetrical things, like the basic shapes, which can give the illusion of

perfection, there is necessarily imperfection. A circle is an approximation and is never a perfect circle, and so is a straight line never quite straight. Instead what Alphius has mistook for perfection is a long sequence of repeated patterns, repeated consistently enough so as to create the illusion of perfection. So perfection in one go was never the goal, but consistency, over a long period of time, and that consistency itself consisted of trial, error and correction.

“Mr. Alphius van Staaden, you stand on trial today for crimes against humanity. For genocide, for two counts of war crimes including the use of internationally banned psychosensory weapons which your state used in combination with propaganda to coerce non-enhanced citizens to into getting cybernetic enhancements. How do you plead?”

“I plead guilty to all charges. I did what I had to lead our people home, to become a perfect people -” The judge quickly interrupted Alphius’s attempt to get his final say in the matter. “Order! Alphius van Staaden I hereby find you guilty of genocide and two counts of war crimes!” Alphius van Staaden did not fight at all as two officers from the International court took him to the vehicle that would carry him to a high security Alethean Prison.

9. Requirements

Nameen's training room was abuzz with the sound of 808 bass and high hats. A sombre sample in the high frequency range played along, mellowing out the sound and creating an overall serious ambience. She was practicing boxing on the speed bags, after an hour strength training session. After boxing she would usually cool down and head to the gun and knife throwing ranges that were built into the basement of her parents house. But today she would have to cut it short because today was the day that she was to leave for Ngwenyama to provide humanitarian aid and whatever other help was required. The South was still no man's land, although the fiefs had control over portions of it. This meant that most people still kept arms, to protect themselves from warlords and militias. She was going to work closely with the leader of one of the fiefs to mobilize a strong enough defense unit to hold off incursions for the next two years while the Alethean Union took the necessary steps required to consolidate enough fiefdoms in the South into an extension of the Alethean Union. Then they could send in defense formally, and begin

rebuilding the area. But Nameen worried that these plans were behind schedule due to the rebellion in Psarionopolis and the possibility of its cessation. Protecting the Alethean mainland was the primary goal for their government at the moment. She hoped that through all of this, she would build up enough networks and rapport to be recruited into the Minerva Group, which was very selective and very secretive of their operations. Almost nobody knew what they did post-war, but people who used to be in-the-know, had an idea. Whereas quantum supremacy was the key goal of the Union during the war, there may have been a shift in focus to deeper applications of quantum mechanics and machine learning in strategy and other studies. There used to be an operation headed by the Nyumba regime called Tachyon, which was allegedly focused on these advanced applications, and after the regime lost the war to the Alethean Liberation Army, most of the government documents that were not destroyed, were taken by the Alethean Union and an international coalition of nations which were overtly or covertly involved in the defeat of the regime. Judging by the name of the project, the prospects of what the secret research might have involved is fascinating. Nameen was in part driven by the desire to help others and serve her country, and in part driven by the desire to know things that only a fraction of a percent of the world had knowledge of. There were no applications for the Minerva Group, but it helped that she had family members who had previously been involved with the group, because it meant that a significant amount of the vetting that needed to be done would already be covered, by virtue of familial relations. She drew up her Ngwenyama mission herself, with very little help from her parents, except giving her hints as to who she might want to prioritize fostering relationships with first, and of course all of the training that they had provided for her. She was, by all accounts, born for this. And

yet, there was always the possibility that this very assumption would be the reason she didn't make it far in this pursuit. She always kept that in mind, acknowledging that nothing was guaranteed. Nameen turned off the music and left the training room to go and take a shower. This afternoon would be the beginning of a two day journey to the South that would be riddled with danger, all the way through. But she knew this - in fact, this uncertainty was what she longed for, to finally throw herself into the uncontrolled world, a world rife with danger.

Percival sat in the back of his Introduction to Edge Computing course. Today was his first day as a student at the University of Alethea, and the lecturer was mapping out requirements for the course. "Living in a world which is almost entirely driven by sensors, an understanding of edge computing and edge database management in tandem with quantum machine learning is vital to being able to contextualize and understand a lot of data quickly, and use that data in ways which are interesting. Now these days a lot of this work is done by autonomous agents and humans play a far less involved role in the process, but you need to have an intimate understanding of the technologies that got us where we are today if you're going to become a data scientist. The age of the data scientist is not yet over. As some of you know, there are interesting applications of temporal data which are bleeding edge and being explored on campuses all around the world today. As your professor, I'm here to prepare you as best I can to be able to get a foot in the door of these emerging forms of data science." Percival was intrigued by Professor Anza Welsh's introduction to this subject, and given that he had only covered legacy data science in his mathematics foundation course, which used to be applicable a few decades ago, he was overwhelmed. What this course would require of him was to let go of everything he

thought he knew, and to immerse himself into this new world. It was no longer just about pattern recognition. It was about learning to work well with our new partners, Artificial Superintelligence and Autonomous Agents to form new stories from our data at a rapid pace. He left class and placed his textbooks on a rover, then ordered for it to be delivered to his apartment. Each apartment had a special, tiny garage door for rovers to come in and make deliveries, extend out their arms to place the delivery in the delivery depot, and then drive out again. Drones were used for watering the gardens, cleaning the streets alongside rovers and humanoid robots, as well as filmmaking and various forms of data collection. The term project was actually to work alongside the mechanical engineering students to collect aerial data on the amount of litter on the streets of poorer areas of the Alethean Union and then to deploy rovers, drones and humanoid robots which would be dedicated to cleaning those areas based on the collected aerial data. It was quite a big project, and a great opportunity for students to learn in a cross disciplinary environment. This meant that this course would likely require Percival to overcome his inferiority complex and learn to work alongside people who were really good at what they do.

10. Probabilities

The first phase of the great war was fought in strategy rooms powered by supercomputers. The name of the game was training the most robust predictive strategy model using all the data you had on everything from your own resources, to your weapons and vehicles, to that of your enemies. The training data even included climate and weather data, economic data, data regarding the social fabric of the enemy state. The one with the most compute and the most data was poised to have the most clear model of how every possible event was likely to turn out. The war itself was more of a secondary thing, especially for the Nyumba regime who hardly had any humans active on the battlefield. The Nyumba regime utilized a combination of autonomous vehicles and weapons, and remotely controlled humanoid robots as infantry. The humans that were actively involved in the war were all cybernetically enhanced. On paper, the regime should have won the war. They had more computers, they had quantum supremacy and they were far more resourced. In truth, the Union of Alethea only came out victorious because they essentially had

the backing, both unofficially and officially, of most nations in the world. The world, by the year 2000 was driven by game theory. Military power could never really be employed to its full capacity because this was not aligned with the optimal strategy for winning the war. This meant that, on paper, a country could have the greatest advantage in terms of technology and resources, and still lose because of strategy. The more secretive the strategy, the better. So in this sense, although the world was at war, it felt more as if it were in a perpetual state of preparation for war, and by the time the war was won, most civilians would have only heard of a few key battles and would never fully understand exactly what happened in the war. Of course this made the history of the great war an incredibly difficult one to study, because none of the key details ever saw the light of day. The expiry date for a secret or top secret classification was 70 years in the Union, so this meant that the details of the war would only begin to surface after about three generations.

Nameen was a ghost in this new land that she found herself in. That's the way she preferred it. She learned the culture, dress code and the languages of the people of Ngwenyama. She learned which areas were safest and which areas were the most dangerous. She had to walk a fine line to achieve what she hoped to achieve. Nameen had finally entered Ngwenyama after a cumbersome twelve hour drive from her home in the Union. The color of the grass varied from a golden brown to a burnt black. The landscape was a tapestry of ruined buildings, informal settlements and craters. The area had never been rebuilt after the war, one of the Union's greatest failures. The sky was overcast, but the air was strangely clean and unpolluted. Naturally of course, since Ngwenyama had not had any industrial zones since before the war. Wild life flourished and herds of wildebeest could

be seen at a distance, roaming the lands. The road was gravel with patches of tar remaining in some stretches of the road. Warlord controlled areas were demarcated by walls spray painted with symbols representing their respective groups. Nameen had studied these well and was familiar with almost all of the warlords that she may encounter in the area. Areas which were not controlled by warlords lacked the informal settlements and were usually fief controlled. These areas were composed of mud buildings and kraals for livestock. Some of the more advanced fiefdoms had found some old 3D printing technology from the Nyumba regime and had utilized it to print dome shaped homes for their people made of materials which were easy to find in the area. In these areas it wasn't uncommon to see commercial buildings with names of stores engraved onto their walls. Nameen wore a face covering as a safety measure. She didn't want anyone she encountered to know that she was a woman. As a rule of thumb she would not stop for anyone until she had reached the Croydonia fiefdom, which was where she had family, and where she would be staying. She drove an old electric 4x4 vehicle which had both a nuclear battery which lasted 72 hours and retractable solar panels which the driver could use to charge the vehicle if they were ever driving a long stretch in which no charging ports were available. This was actually one of the primary problems of the South. The destruction of the war rendered the main form of transportation, namely electric vehicles, useless. This made mobility extremely difficult, and forced people to come up with some truly innovative workarounds just to be able to escape the South and enter the Union. The Union was opened to refugees from the South after the war, and there was a formal process by which someone could become a citizen of the Union after leaving the South. The situation was still quite precarious, and Nameen knew that if the weather

didn't play along and her nuclear battery ran out of juice, she would be stuck. She could only communicate with her parents when she reached Croydonia, where she could set up comms and deploy some network drones to amplify signals from satellite internet constellations. She was not only going to use her equipment for communication, but also to connect Croydonia to the internet so that she could kick start an education program in the area. Thus far, Croydonia had relied on old books that had survived the war to educate their youth, but not all of these books were still usable since a great deal of the books still contained propaganda from the Nyumba regime. For this reason, STEM education was the usual form of education in the South. Mathematics and science retained a certain objectivity that helped them overcome the bottleneck of propaganda. Data collection was also a large part of Nameen's mission in the region. She needed to deploy drones to analyze the soil in the environment to help local farmers choose the best areas to grow their produce, to analyze local weather patterns and reconnaissance drones to monitor the activity of warlords in the surrounding areas to give Croydonia strategic advantage. Before she could start deploying these drones, she had to gain the trust of the locals and the local leadership. Her first two weeks would be dedicated to building these relationships and finding her way around the community. Embedding herself into the community would require her to begin by living exactly as they did and participating in the day to day work that they did. She had a feel for what this may entail before she left Alethea, but there's a limit to how much you can actually know about a region from just research - nothing could quite compare to being there in person. She would spend time recording the information she learned about this region and compiling it into a digital dossier which she would publish through a media platform. If the information she

gathered was of high enough quality, it would be a great help to the Union in their efforts to bring peace to the region. This data could then be used by the Union's APKD strategy model, which was an artificial super intelligence that formulated the Union's foreign policy and strategy. There were times when Nameen wondered whether the Minerva group still had any human roles at all, given the fact that so much of the technology being used by the government was driven by autonomous agents. What if the days of intelligence officers were long over, she thought to herself.

11. Denial

How likely is a person to accept the idea, that in the ultimate story of humanity, they are the antagonist. In most instances, those who have committed the most terrible crimes against other humans were convinced that their actions were somehow justified. Is it even possible to be able to observe oneself objectively, from outside of oneself? Now what if you had all the information presented to you, objectively, and you did the crime - you are the villain. Even in seeing all of the evidence, objectively put forward, could you ever really bring yourself to accept the verdict. We all think we're on a path that's righteous, based on our ideals and what we believe the world ought to be. For some, the initial assumptions are so severely warped and distanced from reality, that their ideal takes on a corrupt enough form for the majority, the crowd to all collectively agree, 'This is wrong'. So

how does this true villain reconcile with the truth? It would require a complete stripping away of the pride and the ego of the individual to even lay the groundwork for such an acceptance, and even then, there's no guarantee that the villain would accept that on aggregate, the majority of their actions were to the detriment of humanity and not to the aid of humanity. We all see the light in ourselves, even if our light is darkness - this is the tragedy. Alphius sat in a cell writing his memoir in a diary with a pen that he was permitted to use by his warden. The four walls that enclosed him every day had become familiar to him. Each and everyday he fought the same battle, against himself and his own conscience. In one moment he is a victim of a mass injustice, in his own eyes, but nobody else's. In another moment, he gradually comes to accept the gravity of his evil actions. He relents. His deepest fears and insecurities. His guilt and his shame have become as voices in his head, all wardens of the hell, to facilitate his eternal torment. He loathes the moments of tranquility and comfort because he knows the moments of shame will return soon enough, as if they never left. Alphius led no one home, but in a great twist, he led himself to a home - one built for a tyrant, a prison of the mind. His hope battered. He was in his moment of reckoning.

Alphius received the food which had been passed through the prison cell's door. The same as last week's food, but strangely, he still looked forward to it. Food was the one constant- the one reward in all of this. An inkling of paradise flowed into his cell once a day when the sun hit the room in just the right way. He was lucky to have a window. Peckish, he ate some of his meal and felt the warmth of the sunlight permeate his skin, so as to give him warmth. He lavished in the ecstasy of relief. One moment of heaven in hell. As soon as he finished his meal, he passed the tray back out of the door compartment, and laid down

to get some rest. Not too bad for the fate of a tyrant, he thought smugly, almost in spite of destiny herself. We take our wins. And then he drifted off into sleep, slowly but surely, hoping this one would be his final sleep.

Percival was another case. He wasn't quite a tyrant, in the sense that he exercised unjust power over others. But what can be more unjust than tyranny against the self. His own inaction was slowly forming a prison. The university was his chance to escape it. Already aged 28, he was a grandpa compared to his classmates, who were about ten years younger than him. He sifted through a data set, looking for insights. Scanning the cells row by row, column by column. Bingo! He found what he was looking for, an anomaly - an irregularity. He uncovered a trend, a flicker of a flame in a dark abyss of numbers. He fine tuned his algorithm to correct for the error, and ran the algorithm again. He didn't have to wait long before he got details on how long the algorithm took to work and how efficient it was. This test was benchmarking a lot higher than his previous scores, and internationally, was also benchmarking quite high compared to the solutions that other data scientists had produced around the world. "Valhalla!" He said, and shut his computer. When things worked out for Percival, those were his moments of heaven. Percival was somewhat tormented by the shadow of his failures. They consistently inhabited his head in the form of self doubt and self criticism. Part of him almost grew to believe that he was not allowed to be happy in life, because he missed his window, and now he was just an old adult desperately holding on to lost dreams. He spent his first degree somewhat distracted by all of the things that university students find value in outside of class, and when he finally gained focus and passion for something, it felt as if it was only a dwindling mirage of what could have been.

His self-criticism, he thought, was appropriate for him - he honestly began to think he deserved it. But as fate would have it, his fortune changed and he gained a new sort of clarity. “How have *you* been?” Carine asked Percival. “I’ve just been stuck on this problem for a week now, but I think I finally solved it. Deadline is tomorrow night.” Percival responded, then asked “And you? How are things with you?” Carine paused for a second, “Oh you know, a mile away from happy, but ten away from the worst...” she said with a laugh. They were speaking on the phone, but it was as if they were with each other. They could feel each other. “Let me come over, can we catch the train to happy?” Percival responded. “Haha...an entire comedian aren’t you.” she said back “I would say come over but we have the entire extended family over, it’s my gogo’s birthday today.” she continued. “Well tell her I wish her a happy seventeenth birthday.” Percival said. “She still dances like she’s seventeen lol... She’s the most active grandma I’ve ever seen on the dance floor. But then again she was born in the 60’s so why am I surprised...” Carine said, both her and Percival laughing. “Wow, yeah, the great war was a vibrant time... When we grow old together we need to be like that” said Percival. “Percy you can barely bend your knees already and you’re only twenty-eight...” she said laughing. “I know right. It definitely feels like I’m nearing retirement age though... a constant reminder that thirty is coming soon...” Percival said. “Can’t wait for you to be thirty, you’ll be a total dilt bro.” Carine said as Percival burst out laughing... “A dilt... mind your language young lady” Percival replied. “Percival is such a dilt name, it’s like you were born to be a dad dude...” Carine added. “Oh wow, okay... you know we’re like the same age right?” Percival said. “Well I wear twenty-eight with grace...” Carine responded. “True... and gravity.” Percival said. “Speaking of which, I finally finished that

Simone Weil book, you need to come over this weekend so I can go on a tangent about it.” Carine said. “That sounds like a plan,” said Percival “I’ll bring the Elvian Elixir” he said. “Yes... please bring the Elvian Elixir.”

12. Tachyon

Pneumopolis

28 November 1999

“Can we send signals to the past?” Jeffrey Gumede, the head of the Minerva Group asked the head science advisor Dr. Mbatha Els. “Theoretically, using the states of particles that are entangled and belong in two separate moments in time, theoretically we can. But there’s no evidence that any nation is anywhere near actually accomplishing this, so I would take this intelligence with a grain of salt.” Dr. Els replied “Grace, how sure are you that you weren’t being fed bad intelligence the entire time?” Gumede asked Grace Otieno, the operative who had been undercover in Nyumba for almost twelve months, collecting human intelligence from the late Dr. Archie Belgaaren. “If Belgaaren was onto me, it’s possible he fed me bad intel, but he seemed very genuine when he was speaking about Tachyon and

above and beyond that, we know that the project named Tachyon exists, our asset in Nyumba can confirm.” Grace replied confidently. “Get Germany on the line.” The conference video screen expanded to include one new window for German intelligence. “Guten Tag Mr. Schneider! Great to see you again” said Gumede, “Sanbonani!” responded Stephen Schneider, the head of German intelligence. “How can I help you today Mr. Gumede?” asked Schneider. “We’ve got a lead on Tachyon, but it’s not sounding very believable. We wanted to see if you’ve been hearing the same things we’ve been hearing. Our operative that was working Nyumba has reported back and...well...listen to what she has to say” Gumede said, secretly avoiding telling Schneider himself because of how insane the entire thing sounded. “So, operation Tachyon, according to my sources, is an experiment involving the manipulation of quantum mechanics to send signals from one point in time to another. From the past to the future, or from the future to the past. If any of this is true, the Nyumba regime has, possibly, leap frogged all of us.” Schneider paused in shock for a moment, knowing that the Minerva Group’s intelligence had always been reliable in the past. “Unfortunately, this may not be far from the truth. We’ve also been looking into Tachyon. I can’t share some details, but, long story short, the Nyumba regime’s quantum program has made leaps that even our scientists are finding it hard to believe. We were just hoping it was all speculation.” Schneider paused again and looked very concerned. “Listen Mr. Gumede, it would be great to continue this conversation another time, but we’re currently swamped with work from the Arctic. We’ll keep an eye on the situation. Let us know if you learn anything else.” He said. “Thank you Mr. Schneider, we’ll keep in touch.”

The Indian Ocean

20 November 1999

“Mayday, mayday... our reconnaissance boat has taken a hit from an Nhlanzi XI Destroyer, we need immediate extraction! Current location latitude: -10.0620165, longitude: 43.6307009.” Arthur Otieno yelled into his comms headset as the reconnaissance boat began to capsize. He climbed his way up onto the hull and held onto the railing on the edge of the ship. He needed to pull his entire body up and jump off the ship and onto one of the lifeboats that had automatically been deployed from the ship as soon as the first projectile struck the boat. His grasp was strong enough for him to pull himself up, but pulling up his entire body weight was the most difficult part. He took a deep breath, granted, and pulled himself up, but as he got up onto the railing he felt a sting on his left leg. He had been hit by a bullet. Luckily it wasn’t an artery. He prepared to jump off the ship and onto the lifeboat, hoping that the supplies on the lifeboat would be enough to patch his wound up. He made the plunge, and directed his fall into the ocean just next to the lifeboat. After a brief moment of falling, he finally impacted the water, and felt a slight sting from the angle that he had landed, since he never took a perfect dive. After a moment submerged underwater, he surfaced and swam to the lifeboat which was only a couple of meters away from him. The pain in his leg was unbearable, but he could only fix it once he got to the lifeboat, but just as Arthur approached it, he found himself surrounded by boats with soldiers aiming automatic weapons at him. He tried to lift his hands up in surrender, but he couldn’t do that and tread water because his leg was injured. Arthur was burned and was about to be captured. He braced himself for what would surely be a world of pain.

Pneumopolis

28 November 1999

“We managed to neutralize Belgaaren, but we may have lost an asset in the process.” Grace explained to all of the members of the Minerva group who were on the conference call. “The asset left us the device, but didn’t show up for work that day. No attempt has been made to regain contact with her because we think she may be burnt.” said Grace. “If she’s burnt then she’s likely already been taken in by the Nyumba authorities. It won’t be long until she gives out the details of the entire operation. The Nyumba regime’s new psychosensory devices are brutal, even the most seasoned operatives will confess under that stress.” Gumedé responded, becoming more anxious about this operation by the second. “We suspect that’s what happened, but it’s possible that she shared the alternative intelligence that we gave her. It would still read true on a polygraph test, since she knows the details to be true. We had one of our operatives run a pretend operation in the Indian Ocean. His ship was spotted and sunk, and he was taken in just over a week ago, but he managed to escape captivity and he’s currently in a safehouse in Comoros” Grace said, “But my recommendation is that we stop the operation completely and begin to extract as many of our assets from the region as we can. If the regime learns that this was us, their response will be strong.” “How much time has the operation bought us?” Gumedé asked. “Maybe a few weeks until they find another engineer who can continue his work. Their algorithm was in development, the team might be able to continue without him, but we suspect his role as lead held some weight, and they likely relied on him for direction, as the original intel report on Belgaaren suggested. He was the only one who knew all of the details, everything was compartmentalized.” “This entire

operation needs to go to bed. I want every piece of information relating to this operation to be destroyed. If the international community learns that we did this, people will be looking at the Minerva Group differently. It won't be great for the Union." "With all respect sir, you gave us the go ahead. We all agreed we were doing the right thing. I'm sure the international community understands what's at stake here." Grace replied. "I did, and I regret it. What we've done is too similar to something the Nyumba regime would have done. You're right that the stakes are high, but if this group loses its moral compass, then the Union and the Nyumba regime are just two sides of the same coin." Gumedede said. "Thank you all for the work that you've done. I will see you all at the next briefing."

The Indian Ocean

20 November 1999

It was now clear that it was the Nyumbean's that had captured Arthur and not just pirates. Pirates would have been better, he thought. The Nyumbean's wasted no time and had Arthur strapped into a metal chair with a table in front of it, and a robotic arm and camera extending from the chair. A man with a head of half human flesh and half metal walked in. One eye was human, one was cybernetic. The man had the stature of a bodybuilder, and must have been about 6 feet tall. His hair was snow white and he had a buzz cut. "You work for the Altheans, am I correct or false?" the man asked Arthur. "No, I'm a fisherman from Greece, I was visiting my cousin in Comoros and decided to go for a tuna fishing expedition." Arthur suddenly felt volts of electricity run through his body. The pain was unbearable, and he shrieked loudly. "Let's try again. You work

for the Aletheans and you were in our oceans spying. Am I correct or false?" the man repeated, still with a very calm tone. "No! False!, I'm just a fisherma-" Another shock came from the electric chair that Arthur was strapped to. He screamed and struggled, instinctively trying to move his arms but unable to as they were tightly secured to the chair. "I know you're lying because I can see your heart rate with my eyes. You unenhanced ones are so stupid. Why would you decide to fight a war against people who are..." the interrogator punched Arthur in the stomach, "Stronger than you! Faster than you. Better than you in every way..." the man said with a level of cruelty that Arthur had never encountered before "Who sent you fishing? Huh?" the interrogator grew impatient, "Speak before I send you into a cardiac arrest with the next shock!". Arthur struggled to speak, still winded from what felt like a tonne of bricks hitting his stomach. "I'm...just a fisherman. Just a Greek fisherman." The interrogator left the room. After a few moments, another man walked in. Much younger and smaller in stature than the last. He spoke with a disarming voice. "Very sorry that they went so rough on you. Look, we want to help you, we're on your side believe it or not. A man with your talents, we could really use you in Nyumba." The man pulled a can of cold Elvian Elixir out of his pocket. "Are you thirsty? Come on, here's something to drink." Arthur remained still and didn't accept the drink. "That, among many other things, is your tell my friend. If you were just a fisherman you would have taken the drink in a heartbeat. You would have probably been begging to turn. Listen, what's your name?" The man asked. "I'm Samuel Georgiou, I'm just a fisherman fro-", the man swiftly interrupted him, "What, from Greece? You're just in Nyumbaeen oceans casually fishing?" Arthur answered, "These oceans belong to the Island of Comoros. I was just fishing." The man smiled and laughed for a

moment “A classic Alethean argument, well done!” The man pulled a chair that was stacked near the entrance of the room, placed it in front of Arthur, and sat on it. “You have a choice, speak now or be made to speak. We have no patience for this petty revolt that you children from the North are trying to pull off. After you speak, we will have your confession played on our national television, and the world will know we have a reason to reduce your lands to rubble. In fact, you know what, I lied a little bit. You actually don’t have a choice - all you have is the kind illusion of choice which we’ve mercifully given to you. Choose wisely!” Arthur kept quiet. “Okay then.” the man said, “You’ve chosen the lengthy way.” The man stood up from his chair and left the room. Moments later the room filled with a grayish fog. Arthur tried his best to keep his eyes open, but they quickly grew heavy, and after a few moments of fruitless effort, Arthur passed out.

Arthur woke up from a deep sleep. His surroundings were hazy. He felt...happy? He felt a strange calm. He heard suction in the background. Whatever they had filled the air with was being sucked out of the room to clear the air again. The same small statured man walked in again. “I trust you slept well my friend. Do you want some hot chocolate, the man said kindly as he offered him the mug of hot chocolate. It smelt good, and Arthur felt like taking the drink. He knew something was wrong, but he couldn’t help but feel at ease and comfortable. “Yes please...” Arthur said. The interrogator smiled smugly. “Here you go.” He gave the cup of hot chocolate to Arthur and Arthur couldn’t help but smile back. “Speak to me. What’s your name, and who do you work for?”. Arthur couldn’t hold back the truth. He tried hard to do so, but he began to cry. “It’s overwhelming isn’t it.” The man said in an almost giddy manner. “You can give up my

friend, it's good to give up sometimes." Arthur's lips quivered, and he opened his mouth to speak, but just before he spoke he heard three loud bangs, and then a thud. The interrogator fell to the ground and lay dead in front of him. A team of three burst into the room. "Come on, we've got to go. We work for the Union." they said as they unstrapped him from the metal chair. Arthur knew something was off the moment they said they worked for the Union. He stood dead still, and said "I'm just a fisherman, I was fishing before they attacked my boat." Arthur knew that if they were Minerva Group, they would have said, "Achilles heel" if they had infiltrated the Nyumbaeans. The dead man stood up, and looked at the team of soldiers, "Okay call it off he's onto us." The man turned and looked Arthur in the eye. "Nice one! Don't worry we've got all the time in the world, we will get answers."

13. Higher Steps

Olympus Base, West Alethea

20 November 1999

“This morning at approximately 9:35am, we received a distress signal from our Blue Lightning reconnaissance boat, which was under the sole control of our operative, codenamed Arthur.” General Britz reported, “Moments later our autonomous drone subs which we were following along on his path in stealth mode to detect enemy submarines, followed emergency protocol and tailed Arthur’s signal. Arthur is one of our voluntary borgs.” “I’m sorry...borgs?” Deputy Director Melissa Marquet responded with slight confusion. “He’s one of the operatives who volunteered for our cybernetic enhancement program, borg is short for cyborg. He’s now half man, half machine. Does that make sense?” The general asked Melissa, “I’m assuming this program was heavily compartmentalized, I’ve been in this chair for almost a month now and I was never informed of its existence.” Melissa responded, looking for more clarity. “We

needed to maintain the illusion that we had no enhanced operatives, so the Nyumba regime didn't start looking at deterrence methods. They already know how to corrupt the software being used by their own enhanced citizens to force compliance through mental manipulation and psychosensory illusions. This weaponization of neural interfaces is extremely difficult for us to combat at the moment, but we're working on it. Now that Arthur has been captured, it's only a matter of time before they discover, in one way or another, that Arthur is a bit more than human." Melissa gave a concerned sigh, "Who else knows?" She asked. "A very small group, some scientists, some engineers, two operatives, myself and the director...and now you." "*So we're actually living in a dystopian nightmare...great*" Melissa thought. "Melissa, there's no clearance level for this. We're operating purely on an ad-hoc basis. No paperwork, nobody in the Alethean government outside of us is aware of this. That's the gravity of the situation. For now we have a strategic advantage, but we need to improve the technology very quickly otherwise we'll face an enemy we can't defeat." "The engineers and scientists...where are they from?" Melissa asked. "We recruited them from the National University of Biko, the best university in the region. They were the top talent in the university's post-grad programme" the general explained. "Now we've tracked down Arthur's current location, he's on a Nyumbaen warship 40 km south of the island of Comoros. We're willing to send in the '*higher steps*' protocol to extract him safely." The general said. "How soon can we send them in?" Melissa asked. "We can have them there within the hour, but we need your go-ahead." The general said with a sense of urgency. "Go." Melissa responded swiftly.

Higher Steps was not a protocol, it was a ritual. Each member knew each observation as intimately as their own name and its meaning. Much like most work in the art of war, controlling a neuro-craft was an intimate and personal process that required a high level of emotional presence and focus. The craft followed your every thought- some thoughts could propel the craft in the right direction, some thoughts could propel it there at the perfect speed - at speeds impossible to most aircrafts. It all depends on how you thought and strategized. These crafts were partially autonomous, and this was the magic - they were a combination of man and machine interfacing to produce results. The machine thought in one way. The human refined it with great what ifs. They were spherical, but more horizontally broad than vertically tall. They were painted with a coat of white nanomaterial designed to reduce weight and absorb solar radiation. They could harness tidal energy and solar energy. They were self replicating - their very matter was programmable and dynamic. And inside each of them a quantum jammer. They could jam the signals of whatever vehicles they encountered. The neuro-crafts were to be deployed from the AL Ocean Thunder war vessel. Since they were essentially amphibious aircrafts, they would initially be deployed in submarine mode, and operate autonomously under the seas, then rise out of the ocean when they were a distance of approximately 5km from the target vessel. Admiral Janus Sidwell led the fleet of vessels, and he gave the command to deploy the vessels. Ocean Thunder was fitted with a combination of physical and touch controls - everybody took their positions and like a well planned dance, they initiated the higher steps protocol. The neuro-crafts were deployed and cruised underwater at a depth of 90 meters underwater. They were undetectable and moved at incredible speeds underwater, thanks to their drag resistant materials. When they were 5km from the target vessel,

they came to a halt, and then rapidly rose vertically and emerged out of the water. They increased speed gradually. At an altitude of 10km above sea level, the neuro-pilots took control of the vessels and got into their formation, two neuro-crafts were responsible for signal jamming, two were decoys, two were equipped with lasers for assault and one, slightly larger neuro-craft had space for two human crew members - this craft would be responsible for extracting Arthur from the Nyumbaen ship. The two jammers led the fleet, followed by the two decoys which would descend and fly to the front and the back of the vessel they were targeting, once they reached those locations, their job was just to maintain a hover and dodge the ships defenses. Now something really interesting about neuro-pilots is that they had always reported that they could anticipate when a projectile was about to be fired at their craft - it was like an extra sense, they could feel it. This was something only a human could do, you couldn't possibly automate it, so Minerva had trained the higher steps operative in this form of intuitive piloting. They were also able to deploy counter measures, in the form of drones which would take hits before the decoys took hits. The crewed neuro-craft had cloaking technology, and so the combination of the assault crafts, the decoy crafts and the jammers served as a distraction as the cloaked craft hovered above, using a combination of infrared and a tracking system to trace Arthur's neural implant, which he received when he became cybernetically enhanced, to monitor his vitals and for emergency situations like this, where he needed to be rescued.

The sound of pandemonium woke Arthur. Either the ship he was being held on was under attack, or this was just another attempt to psychologically break him down. He assumed it was the latter, and remained calm, knowing that this could only work on him if he wasn't aware it was happening. But moments later Arthur

received a pattern of neural pings in morse code - only Minerva could have sent this, unless the Nyumba regime was aware of Minerva's cybernetic enhancement program, which would be a disaster - it would essentially mean that they had lost edge, and maybe lost the war. Arthur had to make a decision. He chose to trust the signal, and used his neural implant to activate his cybernetic muscle fibres, which were much stronger than his actual muscle fibres and could likely help him loosen himself from the chair that he had been strapped to. This was a last resort, because if he had used this too early, the Nyumba regime would become aware that he was cybernetically enhanced, and even if he had escaped earlier, he would not have been able to destroy the vessel and neutralize its entire crew on his own, meaning that the secret would leak because of him - a compromise he wasn't willing to make. But the morse code signal indicated that they had initiated the Higher Steps protocol. Minerva must have really valued him, he thought. To reveal this technology before the main naval confrontation that they had been planning was a bold step. Arthur tore through the restraints that held him - the metal of the restraints bent and bolts holding it together popped off. He got up, walked to the door and waited for a guard to show up - they would certainly send one down to ensure he didn't escape, since they were under attack. After waiting patiently for a few minutes, someone showed up. Arthur had already worked out that the access control was biometric, and all he had to do was clone the biometrics of one of the guards, and the artificial skin which covered his hands would reshape his fingerprints to match those of the guard. Then he could enter and exit, in theory, any room on the ship. As the guard entered he disarmed him and got him into a choke-hold. Both the guard and Arthur were cybernetically enhanced, so this would be tricky. The only way to win would be through brute force and superior combat. Arthur

was trained in mixed martial arts, and was a solid fighter, but his opponent probably was too. One thing Arthur knew from their intel on the Nyumbaen cybernetic enhancement program was that their neural interfaces were fitted on both temples of their head. So after a few moments of hand to hand combat, Arthur gripped his hands into a fist and hit at the temples of the guard, hoping to hit with a hard enough fist to temporarily disable the neural system, which might give Arthur the edge. His instinct was right - the guard's artificial muscle fibres were jammed and the guard froze in position and then fell to the ground. Arthur picked up the weapon and made his way to the hull of the ship. The neuro-craft detected him, and descended towards him, then opened its doors while still cloaked so that the inside of the craft was visible, but the rest of it was not. Arthur entered the craft and the doors shut. Inside the craft he could see a 360 degree display and interface showing the view from outside the craft. The craft ascended, and whizzed away from the scene, with Arthur safe and in one piece.

14. The Counter-Revolution

Psarionopolis is a historically rich city. Being a coastal city it boasts beautiful sceneries, and at sunset the oceans reflect the orange light of the sun magnificently, giving a full sense of the vastness of the Indian Ocean. Situated on the East Coast of Alethea, Psarionopolis was a hub for trade earlier on in the history of Alethea, when the Union was still not yet formed. The people of Psarionopolis were fishermen and naval engineers, having mastered the craft of engineering fishing and trade vessels over the 300 years of their history. It's interesting how much of

the trajectory of history is contingent on need, and the actions taken to meet that need - or the inaction. If the people of Psarionopolis decided not build fishing boats, and opted for an easier way out of getting food, the Union of Alethea could have never won the Great War, which was largely fought at sea. The people of Alethea owed a great debt to the ancestors of the people of Psarionopolis for their ingenuity and craftsmanship. And yet, today, the people of Psarionopolis feel forgotten - left behind in the progress of Alethea. Pneumopolis is one of the most technologically advanced and affluent cities in the world, but the wealth in the Union of Alethea is far from evenly distributed. Some might argue, and correctly so, that the utopian dream of economic equality is not one which can be achieved perfectly, but it should still be strived for so as to shoot for the stars and land on the moon. The people of Psarionopolis experienced a vastly different world from those living in other cities of Alethea, being the most crime-ridden city in the Union and a hub for criminal syndicates. Psarionopolis also had a homelessness problem, and many people live in informal settlements and in conditions of poverty, with little access to the world class education that Alethea has to offer. The great promise of a united Africa was not living up to the expectations of the people, inasmuch as it was a huge improvement from the tyranny of the Nyumba Regime.

Where hope had lacked, rebellion filled the void - and its latest form was an insidious mix of present and past, an unholy alliance between well intentioned revolutionary spirits, and a new and rising collective who called themselves, Poseidon. Poseidon was a breakaway faction of the Minerva Group, which had also recruited some ex-Nyumbaen intelligence officers. The group was formidable, albeit small, and very secretive. The Minerva Group was not yet aware of this formation, and Poseidon took full advantage of this. Poseidon sought individuals and groups of

people calling for a revolution in the Union, and played on the growing frustrations and resentment of the people of Psarionopolis. In a timespan of two years they had built Poseidon safehouses and created shell companies to generate revenue for the organization in the region. The sharp increase in crime in Psarionopolis could also be attributed to the actions of Poseidon, although the local revolutionaries were not aware of this. Slowly but surely, Poseidon had begun to enact a campaign of destabilization across the region, with the goal of turning the region against its capital and calling for a cessation of the region.

